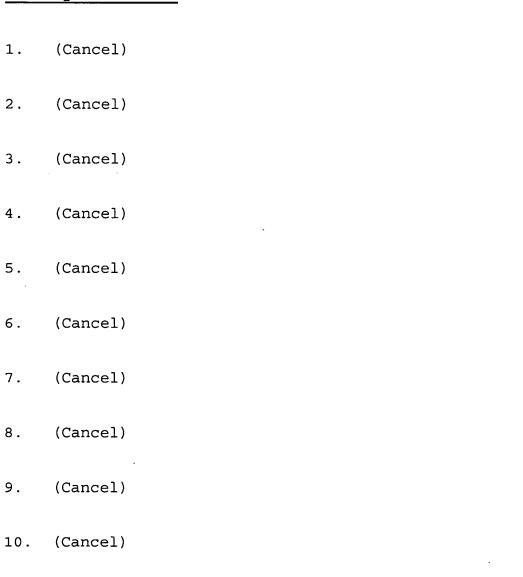
Amendments to the Claims:

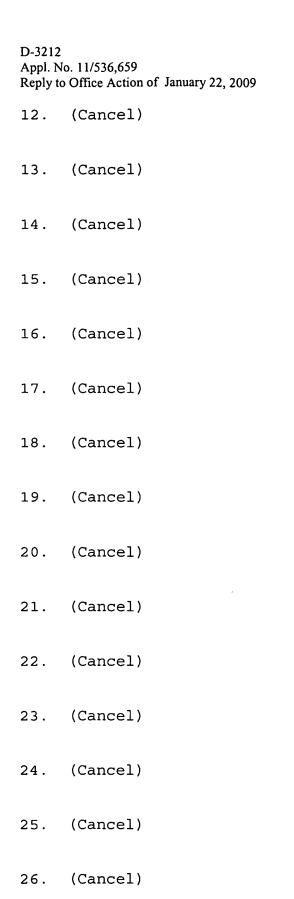
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

11.

(Cancel)





D-3212 Appl. No. 11/536,659 Reply to Office Action of January 22, 2009

Claims 27-34 (Canceled)

- 35. (Cancel)
- 36. (Previously presented) A method of separating CO_2 from a gas stream containing CO_2 and an anaesthetic gas, which comprises transporting the gas stream at a periodically varying flow rate through the gas separation device, said device comprising a supported carrier liquid membrane in which the carrier species is an organic base present at a concentration sufficient to provide a separation factor α (CO_2 , a),

where
$$\alpha (CO_2, a) = \frac{R_{CO2}}{p_{CO2}} \cdot \frac{p_a}{R_a}$$

wherein R represents permeation rate, p partial pressure of a gas in the feed gas stream and a an anaesthetic gas, greater than unity.

- 37. (Previously presented) A method for separating gases in a gas stream, which comprises contacting the gas stream comprising carbon dioxide and an anaesthetic gas with a supported carrier liquid membrane in which the carrier is an organic base present in a concentration of at least 4.5 mol.dm⁻³.
- 38. (Cancel)
- 39. (Previously presented) A method as claimed in claim 37, in which the gas stream is transported at a periodically varying flow rate over the supported carrier liquid membrane.

- 40. (Previously presented) A method as claimed in claim 36, wherein the device comprises a supported carrier liquid membrane in which the carrier species is present in a concentration of at least 4.5 mol.dm⁻³.
- 41. (Previously presented) A method as claimed in claim 36, wherein the membrane is a hollow fibre membrane, and is in the form of a fibre bundle.
- 42. (Previously presented) A method as claimed in claim 36, which further comprises generating a sweep gas stream or providing a vacuum on a face of the membrane remote from the gas stream.
- 43. (Previously presented) A method as claimed in claim 42, which further comprises humidifying the sweep gas stream.
- 44. (Previously presented) A method as claimed in claim 37, wherein the membrane is a hollow fibre membrane, and is in the form of a fibre bundle.
- 45. (Previously presented) A method as claimed in claim 37, which further comprises generating a sweep gas stream or providing a vacuum on a face of the membrane remote from the gas stream.
- 46. (Previously presented) A method as claimed in claim 45, which further comprises humidifying the sweep gas stream.

D-3212 Appl. No. 11/536,659 Reply to Office Action of January 22, 2009

47. (Currently amended) Apparatus for separating CO_2 from a gas stream containing CO_2 and an anaesthetic gas, the apparatus comprising a gas separation device and means comprising a bellows ventilator for transporting the gas stream at a sinusoidally varying flow rate through the gas separation device, the device comprising a supported carrier liquid membrane in which the carrier species is an organic base present at a concentration sufficient to provide a separation factor α (CO_2 , a),

where
$$\alpha (CO_2, a) = \frac{R_{CO2}}{p_{CO2}} \cdot \frac{p_a}{R_a}$$

wherein R represents permeation rate, p partial pressure of a gas in the feed gas stream and a an anaesthetic gas, greater than unity.

48. (Cancel)

- 49. (Previously presented) Apparatus as claimed in claim 47, wherein the device comprises a supported carrier liquid membrane in which the carrier is present in a concentration of at least 4.5 mol.dm⁻³.
- 50. (Previously presented) Apparatus as claimed in claim 47, wherein the membrane is a hollow fibre membrane, and is in the form of a fibre bundle.
- 51. (Previously presented) Apparatus as claimed in claim 47, which further comprises means for generating a sweep gas stream

or means for providing a vacuum on a face of the membrane remote from the gas stream.

- 52. (Previously presented) Apparatus as claimed in claim 51, which further comprises means for humidifying the sweep gas stream.
- 53. (New) A method as claimed in claim 36, wherein the organic base is selected from the group consisting of diethanolamine, ethanolamine and ethylenediamine.
- 54. (New) Apparatus as claimed in claim 47, wherein the organic base is selected from the group consisting of diethanolamine, ethanolamine and ethylenediamine.
- 55. (New) Apparatus for separating CO_2 from a gas stream containing CO_2 and an anaesthetic gas, the apparatus comprising a gas separation device and a means for transporting the gas stream at a sinusoidally varying flow rate through the gas separation device, the means comprising a bellows ventilator, the device comprising a supported carrier liquid membrane in which the carrier is an organic base present in a concentration of at least 4.5 mol.dm⁻³.
- 56. (New) Apparatus as claimed in claim 55, wherein the membrane is a hollow fibre membrane, and is in the form of a fibre bundle.

D-3212 Appl. No. 11/536,659 Reply to Office Action of January 22, 2009

- 57. (New) Apparatus as claimed in claim 55, which further comprises means for generating a sweep gas stream or means for providing a vacuum on a face of the membrane remote from the gas stream.
- 58. (New) Apparatus as claimed in claim 57, which further comprises means for humidifying the sweep gas stream.
- 59. (New) Apparatus as claimed in claim 55, wherein the organic base is selected from the group consisting of diethanolamine, ethanolamine and ethylenediamine.